In the Specification

Please substitute paragraph [0005] beginning on page 2 as follows:

In one aspect of the invention, IFN-γ, as well as other cytokines, can be expressed in a wide variety of microbial cells, including the bacterium *Pseudomonas fluorescens*, through the use of genetic engineering techniques well-~~know~~ known in the art. Appropriately reconstructing the cytokine gene and positioning it precisely in a host plasmid-vector between a strong regulated promoter and transcription/translation terminators, routinely accomplishes the expression of IFN-γ in a particular foreign host. The suitability of any such host is also routine to test by ordinary means by one of ordinary skill in the art, without undue experimentation. Once the transformed microbial cells have expressed the IFN-γ or other cytokines to a high level, the cells can be amended with agents, including heat and chemical agents, that kill (sterilize) the cells, stabilize an expressed active cytokine, and amend the cell wall for optimal release of the cell-encased cytokine. For example, the sterilization/amendment procedure used in the present description for the cells of *Pseudomonas fluorescens*, expressing IFN-γ, is a modification of a process originally used for the production of a commercial biopesticide, MVP (4;9;19). According to this method, the cells of *P. fluorescens* are treated with Lugol iodine at a pH of about 4.3. This pH thoroughly sterilizes the culture *in situ*, amends the cell wall for physical durability, and renders the bacterial cell wall susceptible to proteolytic dissolution (9). The procedure also eliminates cellular flocculation, and appears to decrease the endotoxic properties of the *Pseudomonas* cell wall.

Please substitute paragraph [0017] beginning on page 4 as follows:

Figure 11 illustrates the immunoadjuvant activity of BGI/ARCs and the ~~ability o~~ ability of BGI-ARCs to accelerate the immune response of calves to an antigen (*e.g.*, porcine serum albumin).

Please substitute the following paragraph on page 20, beginning at subsection HH):

HH) In various implementations of the methods of embodiments M through GG, compositions according to the subject invention can be administered orally, parenterally, as sprays (including inhalation sprays), topically, rectally, nasally, buccally, vaginally or via an implanted reservoir. The term parenteral, as used herein, includes subcutaneous, intradermal, intravenous, intrastriatial, intramuscular, intraperitoneal, intrathecal, intraventricular, ~~intrasternal ,or~~ intrasternal, or intracranial injection and other infusion techniques;

Please substitute Reference No. 24 beginning on page 37 as follows:

24. **Yilma, T., S. Owens, E. H. Fennie, and K. P. Anderson** . 1989. ~~Enahncement~~ Enhancement of primary and Secondary Immune Responses by Interferon-gamma. Adv.Exp.Med.Biol. **251**:145-152.

Please substitute the following Table 8 beginning on page 45 through to page 46:

TABLE 8:

CHEMOKINES

Reference	**Protein**	**Function**
BCA-1 / BLC-1	B Cell-Attracting chemokine-1 (B-Lymphocytes Chemoattracting) (CXCL13)	B-cell attractant
BRAK / Kec	CXC chemokine in breast and kidney / Kidney-expressed chemokine (SCYB14, CXCL14)	Involved in MΦ development
CXCL16	CXC-chemokine 16	
ENA-78 / LIX	Epithelial cell-derived neutrophil-activating protein 78 (CXCL5, SCYB5)	Neutrophil activating peptide
Eotaxin-1	Eotaxin-1 (CCL11)	Eosinophil chemotaxis
Eotaxin-2 / MPIF-2	Eotaxin-2 (CCL24,CKß6)	Chemotactic agent for T-cells and eosinophils
Exodus-2 / SLC	Exodus-2 (CCL21, CKß9, SCYA21)	Angiostatic activity, chemotacitc agent for T-cells, dendritic cells, $CD34^+$ hematopoietic cells, NK cells, and B-cells
Fractalkine/Neurotactin	Fractalkine / Neurotactin (CX3CL1)	Chemotactic agent for T-cells and monocytes
GROalpha / MGSA	Melanoma Growth Stimulatory Activity protein (CXCL1)	Neutrophil activation
HCC-1	Hemofiltrate CC chemokine 1 (SCYA14, CCL14)	Chemotactic agent for monocytes and THP-1 cells
IL8	Interleukin 8 (CXCL8)	Chemoattraactant for neutrophils, basophils, and T-cells; activates neutrophils
I-TAC	Interferon-stimulated T-cell alpha chemoattractant (CXCL11)	
Lymphotactin / ATAC / SCM	Lymphotactin (CL1, LTN)	Chemoattractant for T and NK cells

Reference	**Protein**	**Function**
MCP-1 / MCAF	Monocyte Chemotactic Protein 1 (CCL2, SCYA2)	Chemoattractant for monocytes and neutrophils;~~ agumments~~ augments neutrophil anti-tumor activity
MCP-3	Monocyte Chemotactic Protein 3 (CCL7, SCYA7)	Chemoattractant for monocytres and eosinophils; augments monocyte anti-tumor activity
MCP-4	Monocyte Chemotactic Protein 4 (CCL13, SCYA13)	Chemoattractant for monocytes, lymphocytes, basophils, and eosinophils
MDC / STCP-1 / ABCD-1	Macrophage-Derived Chemokine (CCL22, SCYA22)	Chemoattractant for T-cells, activated lymphocytes, and monocytes
MIP-1α	Macrophage Inflammatory Protein 1 alpha (CCL3, SCYA3)	Chemoattractant for lymphocytes
MIP-1β	Macrophage Inflammatory Protein 1 beta (CCL4, SCYA4)	Chemoattractant for~~ moncytes~~ monocytes, ~~densritic~~ dendritic cells, NK cells and T-cells
MIP-2α / GROß	Macrophage Inflammatory Protein 2 alpha (CXCL2)	
MIP-3α / Exodus / LARC	Macrophage Inflammatory Protein 3 alpha (CCL20, SCYA20)	Chemoattractant for lymphocytes, activated NK cells, dendritic cells
MIP-3β / Exodus-3 / ELC	Macrophage Inflammatory Protein 3 beta (CCL19, SCYA19)	Chemoattractant for T-cells, B-cells, and dendritic cells
MIP-4 / PARC / DC-CK1	Macrophage Inflammatory Protein 4 (CCL18, CKß7, SCYB18)	Chemoattractant for T-cells
RANTES	Rantes, formerly "T cell-specific protein" (CCL5)	Chemoattractant for memory T-cells, monocytes, and eosinophils
SDF1α	Stroma Cell-Derived Factor 1 Alpha	Chemoattractant for neutrophils, lymphocytes, and monocytes
TARC	Thymus and Activation-Regulated Chemokine (CCL17)	Chemoattractant for activated T_{H2}-cells
TECK	Thymus-Expressed Chemokine (CCL25)	Chemoattractant for thymocytes, MΦ, Thp-1 cells, and dendritic cells

Please substitute the following Table 9 beginning on page 47:

TABLE 9:

CYTOKINES

Reference	**Protein**	**Function**
GM-CSF	Macrophage Colony Stimulating Factor	Growth and differentiation of hematopoietic lineages (*e.g.*, granulocytes, MΦ, eosinophils, and erythrocytes
IFN alpha	Interferon Alpha	Anti-tumor and anti-viral activity
IFN beta	Interferon Beta	Antiviral, antibacterial, and anticancer activity
IFN gamma	Interferon Gamma	Stimulates CTL responses;antiviral and anti-proliferative activity on transformed cells
Interleukins		
IL-1 beta	Interleukin-1 Beta	Stimulates B-cell maturation/proliferation
IL-2	Interleukin-2	Regulates immune response and T-cell proliferation
IL-4	Interleukin-4	Activates B-cells
IL-6	Interleukin-6	B-cell differentiation
IL-10	Interleukin-10	~~Immunosupressive~~ immunosuppressive and anti-inflammatory
IL-12elasti	Interleukin-12 (with elastin linker between subunits)	Growth factor for activated T-cells and MNK cells; enhances lytic activity of NK/LAK cells
IL-13	Interleukin-13	Anti-inflammatory agent
IL-15	Interleukin-15	Stimulates T-lymphocyte and NK proliferation
IL-16	Interleukin-16	Chemoattractant for CD4 lymphocytes, monocytes, dendritic cells, and eosinophils
IL-18	Interleukin-18	Induces IFN-γ and augments NK activity
IL-18BPa	Interleukin-18 binding protein, isoform A	Inhibitor of early Th1 cytokine response
IL-23	Interleukin-23	Stimulates proliferation of memory T-cells; stimulates IFN-γ production
IL-24	Interleukin-24	
VIP	Vasoactive Intestinal Peptide	Vasodialator; lowers arterial blood pressure; stimulates myocardial contractility; smooth muscle relaxant; MΦ activator; stimulates T-cell proliferation
TNF Superfamily		
LIGHT / TNFSF14	Tumor Necrosis Factor SuperFamily member 14	Induces apoptosis, stimulates T-cells, suppresses *in vivo* tumor formation
sTALL-1 /	Tumor Necrosis Factor	Stimulates B-cell proliferation

TNFSF13B (also called BLyS, BAFF, THANK)	SuperFamily member 13B	
TNFalpha / TNFSF2	Tumor Necrosis Factor Alpha	Cytolysis of tumor cells; induces cell differentiation
TWEAK / TNFSF12	Tumor Necrosis Factor SuperFamily member 12 (also called Apo3L)	Inces tumor cell death, influences astrocyte behavior